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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/539,048

02/03/2006

Artur Lachowicz

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DICKSTEIN SHAPIRO LLP  
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EXAMINER

BOYLE, ROBERT C

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/539,048	<b>Applicant(s)</b> LACHOWICZ ET AL.	
	<b>Examiner</b> ROBERT C. BOYLE	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 26, 2009 has been entered.
2. It is noted that the independent claims have been amended to make the Michael addition aspect of the invention explicit as was discussed in the interview of October 6, 2009. This amendment overcomes the rejections presented in the previous Office Action in view of Starks.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 9 recites: "wherein the vinyl compound (b)", however claim 6 states that (a) has the vinyl group and (b) is an acrylic ester. Therefore, it is unclear as to which ingredient the "vinyl compound (b)" refers to. For the purposes of this Office Action, it is assumed that "(b)" is a typographical error and should read "(a)", making the language consistent with a vinyl compound.

***Claim Rejections - 35 USC § 103***

6. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rheinberger (US 5,539,017).

7. As to claims 1, 6, Rheinberger teaches a composition that is the reaction product between (a) a Michael donor, such as an acetoacetate with (b) a Michael acceptor, such as a diacrylate and (c) a modifying agent such as butyl methacrylate (abstract; col., 2, ln. 18-58; col. 3, ln. 12-30; col. 4, ln. 44-62; col. 7, ln. 50-col. 9, ln. 35). Rheinberger does not specifically teach the claimed equivalent ratios.

8. However, Rheinberger teaches the properties of the composition will change depending on the ratios used (Table 6). Therefore, it is the examiner's position that the equivalent ratios are result effective variables because changing them will clearly affect the type of product obtained. See MPEP 2144.05(B). Case law holds that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In view of this, it would have been obvious to one of ordinary skill in the art to utilize the equivalent ratios within the scope of the present claims so as to produce desired end results.

9. As to claims 2, 4-5, 9, 32 Rheinberger teaches the modifying agent can be 2-hydroxyethyl methacrylate (col. 4, ln. 44-62), 2-hydroxyethyl acrylate or glycidyl acrylate (col. 5, ln. 1-3).

10. As to claims 3, 31, Rheinberger teaches acetoacetates (col. 3, ln. 12-30).

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11. As to claim 7, Rheinberger teaches a composition that is the reaction product between (a) a Michael donor, such as an acetoacetate with (b) a Michael acceptor, such as a diacrylate and (c) a modifying agent such as butyl methacrylate (abstract; col. 2, ln. 18-58; col. 3, ln. 12-30; col. 4, ln. 44-62; col. 7, ln. 50-col. 9, ln. 35). Rheinberger teaches that monomeric acrylates can be added prior to the addition of the diacrylates (col. 8, ln. 60-col. 9, ln. 12). Note that the PETA is added to a mixture already containing the AAEMA and GTAA and catalyst.

12. As to claim 8, Rheinberger teaches the properties of the composition will change depending on the ratios used (Table 6). Therefore, it is the examiner's position that the equivalent ratios are result effective variables because changing them will clearly affect the type of product obtained. See MPEP 2144.05(B). Case law holds that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In view of this, it would have been obvious to one of ordinary skill in the art to utilize the equivalent ratios within the scope of the present claims so as to produce desired end results.

13. As to claim 10, 33, Rheinberger teaches catalysts (col. 4, ln. 4-10; col. 6, ln. 4-6).

14. As to claims 11, 15, 19, 23, 27, Rheinberger teaches the compositions can be cured in heat (col. 3, ln. 56-67) or light (col. 7, ln. 63-col. 8, ln. 5) and that the curing can be a radical polymerization (col. 4, ln. 11-44).

15. As to claims 12, 16, 20, 24, 28, Rheinberger teaches that the curing is a radical polymerization (col. 4, ln. 11-44) and that radical polymerization can occur through a redox initiator system or photoinitiators (col. 24-36). Additionally, in view of Rheinberger's recognition that redox initiators and photoinitiators are equivalent and interchangeable, it would

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have been obvious to one of ordinary skill in the art to photoinitiators with redox initiators and thereby arrive at the present invention. Case law holds that the mere substitution of an equivalent (something equal in value or meaning, as taught by analogous prior art) is not an act of invention; where equivalency is known to the prior art, the substitution of one equivalent for another is not patentable. See *In re Ruff* 118 USPQ 343 (CCPA 1958).

16. As to claims 13-14, 17-18, 21-22, 25-26, 29-30, Rheinberger teaches a cured product such as molded denture articles (col. 2, ln. 8-14).

### ***Response to Arguments***

17. Applicant's arguments, see with respect to the rejections under Starks have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, on an updated search, a new ground of rejection is made in view of Rheinberger.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT C. BOYLE whose telephone number is (571)270-7347. The examiner can normally be reached on Monday-Thursday, 9:00AM-5:00PM Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROBERT C BOYLE/  
Examiner, Art Unit 1796

/Vasu Jagannathan/  
Supervisory Patent Examiner, Art Unit 1796